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**In-Progress Review**

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The Fort Knox experience underlines the importance of good preparation prior to undertaking an ICUZ study: (1) understanding the ICUZ process and study requirements: (2) assembling a team of competent personnel from the appropriate elements who can dedicate their time, as needed, to the study; and (3) having complete information on noise projections and contours. The overall lesson learned, applicable to both planning and implementing an ICUZ study is communication. Both within the installation and between the installation and the public, communication is critical to achieving ICUZ goals.

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IN-PROGRESS REVIEW

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## EXECUTIVE SUMMARY

The goal of the TRADOC ICUZ approach is to establish a way for the installation and local communities to jointly work together on noise and land use management problems in order to forestall future noise conflicts. This report provides an evaluation of the first application of the TRADOC ICUZ process, at Fort Knox, and relates lessons learned.

The Fort Knox ICUZ study did successfully provide a means for communication and mechanism for interaction. The draft MOA is evidence of this, as are the positive attitudes of installation personnel and community leaders. The local communities learned that Fort Knox not only recognizes the potential for noise conflict, but is willing to work with communities to reduce that potential through land use planning and other measures. For example, upon seeing the extent of noise contours projected for the conversion of 105 mm to 120 mm guns by the year 2000, Fort Knox reduced conversion plans from 100 to 10 percent. For the first time, and in response to the installation's openness and willingness, a number of community leaders or planning departments have contacted Fort Knox to discuss planning and zoning matters. For its part, Fort Knox feels that the ICUZ study provided a format for them to describe projected noise levels to communities and positioned them favorably for confronting possible legal actions.

The Fort Knox experience underlines the importance of good preparation prior to undertaking the study: (1) understanding the ICUZ process and study requirements; (2) assembling a team of competent personnel from the

appropriate elements who can dedicate their time, as needed, to the study; and  
(3) having complete information on noise projections and contours. The  
overall lesson learned, applicable to both planning and implementing an ICUZ  
study is communication. Both within the installation and between the  
installation and the public, communication is critical to achieving ICUZ  
goals.



## I. INTRODUCTION

### A. Purpose

This paper provides an evaluation of the first application of the Installation Compatible Use Zone (ICUZ) Community Involvement (CI) process.\* The process was first applied at Fort Knox, Kentucky. The paper briefly describes how the process was applied and what impacts it had. It also assesses what was learned at Fort Knox that would be useful to other installations in preparing for an ICUZ-CI study.

Information for the evaluation was largely obtained through interviews with those involved in the program at Fort Knox, including installation personnel as well as community leaders. These people were asked to comment on the effectiveness of the process and how they felt about their involvement. The major concern was to identify what improvements might be made to the process, not to judge the Ft. Knox experience but to learn from it.

### B. Background

The goal of an ICUZ study is protection of the installation's mission as well as the neighboring public by identifying noise impact areas. Emphasis is on preventing future problems: ICUZ is a planning process to prevent the

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\* For convenience, Appendix A gives a brief description of the ICUZ process, which is taken from the ICUZ manual.

development of land uses that would be incompatible with levels of noise generated by an installation. Basically, an ICUZ study examines noise levels resulting from Army activities and identifies off-post areas where noise is, or may become incompatible with noise sensitive land uses; evaluates alternatives for reducing noise; and where noise cannot be reduced, endeavors to educate and work with local communities and zoning boards to restrict noise sensitive development.

There are four action objectives in attaining the ICUZ goal:

1. Achieve future compatible land uses in surrounding communities. The primary measure of success of an ICUZ study from the Army's point of view is the change in predicted land uses of surrounding communities to uses more compatible with noise generated as a result of mission related activities.
2. Create a public image of the installation as a responsible neighbor. Significant long term benefits to the installation are likely if it is perceived to be a responsible neighbor.
3. Reduce conflict over noise. ICUZ offers a planning tool to manage conflict. However, care will be needed in evaluating this objective because it may be that in the short run ICUZ may elevate the level of conflict surrounding noise in local communities. In the long run noise complaints may decline or not be as likely to reach critical stages.

4. Install a policy for noise creation. To insure continued maintenance of an ICUZ process after the study is completed, the installation would need to establish a policy to: (a) coordinate the prediction of noise magnitudes with impacts on surrounding communities, and (b) pursue alternatives which could lessen noise impacts whenever possible.

As a means of facilitating these four objectives, an ICUZ study includes a fifth one which is a process objective:

5. Create an open, visible and traceable process of information exchange between the Army/Installation and affected publics in the ICUZ process. In developing the ICUZ study process, it was assumed that the incorporation of the CI perspective of group process and conflict management would result in an open exchange of information.

It is important to monitor study objectives so as to assess their performance in protecting the installation mission. For each objective, the possible indicators and means for their measurement are given on Table 1. In looking at the nature of the indicators and measures it is clear that monitoring and evaluation could go on for years. The evaluation presented here reports on what is known so far for each of the objectives. However, it necessarily focuses on the fifth (i.e. the development and process of an open exchange of information) by considering process implementation at the first installation at which it was applied and by assessing where and why any difficulties arose.

C. Evaluation Approach Taken

Consistent with the objective of helping TRADOC identify what, if any, changes need to be made in the application of the ICUZ-CI process, the approach taken in preparing an evaluation was to talk with those having the most involvement in the Fort Knox experience and to learn from them. Seven interviews were conducted (Appendix B) with the key player on the ICUZ team (the Chief of the Environmental Management Division, DEH), the Range Scheduling Officer, and a representative from the Public Affairs Office. The other four interviews were conducted with five local officials: a city planner, a city engineer, a city council member, a County Judge Executive, and a regional planning commission member.

Prior to the interviews, a list of questions was prepared to guide the collection of information. Questions were designed to be appropriate to the person being interviewed. Thus, there was some difference in questions posed to community leaders, and ICUZ team members (Appendix C). During the interviews, respondents were permitted to elaborate on and even depart from the question; the main intent was to keep them focused on their participation in the ICUZ study and their views about the study.

In addition to information from the interviews, data was also to be collected through an audit trace. This data would include a monitoring of the number of noise complaints both before and during the study as well as documentation of ICUZ team activities and interaction with the public. The

design for the audit trace is given on Table 2. Information for the audit trace was to be provided by Fort Knox, however, the trace was not formally carried out because so few complaints were received either before or during the study.

## II. DEVELOPMENTS IN THE APPLICATION OF THE ICUZ-CI PROCESS

### A. Description of the Study Area

Fort Knox provides support to four different training brigades plus about 15 other tenant groups including a FORSCOM brigade. For a training base, Fort Knox covers a rather small area (109,250 acres). As a result, the mission has little maneuverability: any increases in noise are difficult to isolate from the public.

Fort Knox straddles portions of three Kentucky counties: about half of its area lies in Hardin County, a third in Bullitt County, and the remainder in Meade County. The countryside is extremely rural. Six small communities are its neighbors (Figure 1 and Table 3). Noise from Fort Knox currently impacts each of these counties and communities (Figure 2). Projections indicate some changes in noise impacts as conversions in weapons and community development occur (Figures 2 and 3).

In general, towns to the west of Fort Knox, have good access to the installation and a strong economic dependence on it. As a result, noise does not appear to create a great deal of annoyance for these communities. People in Radcliff, for example, are aware of the noise but typically are used to it and regard it as an integral aspect of Fort Knox's mission and existence. Additionally, Fort Knox has long had a good relationship with community leaders in the towns to its west.

In contrast, towns east of Fort Knox (eg. Lebanon Junction and Shepardsville) have very poor access to the installation because of rugged topography. These communities also are impacted by the noise, but they seem to have a much lower tolerance to it. This appears to be so at least partly because of the lack of economic dependence on Ft. Knox. They have developed a negative attitude towards Fort Knox and there is little communication with the installation. Lebanon Junction in particular is hostile and, as indicated on Table 3, receives the brunt of the noise impacts. Letters from the Bullitt County Judge Executive (winter and spring 1985) to the Commander, Fort Knox mention numerous noise complaints as well as landings of stray shells. In addition, noise contours are generally probably underestimated for this area because the technology does not take into account terrain effects on noise.

A potential for increased conflict over noise is evident. Partly because Fort Knox's small physical size cannot very well accommodate any mission change that results in more noise, but also because the surrounding area is becoming more developed. The economically dependent communities could develop to the point that they are self-sustaining. In the view of Scott Saunders, PAO, if this happens, not only will more people be impacted, but it is likely that noise tolerance will decrease. It is possible that this could happen sometime around 2000 to 2025. In this respect the timing of the Fort Knox ICUZ study was advantageous in that by anticipating future noise problems the installation and local communities can begin to take steps now to forestall these situations.

## B. Study Chronology

The chronology of events in the Fort Knox ICUZ study is detailed in Appendix C. Appendix B lists the local officials and the Fort Knox personnel who were involved. Basically the approach consisted of ICUZ workshops and formation of an ICUZ team with subsequent ICUZ briefings for local officials.

The ICUZ effort at Fort Knox was initiated in January 1982 when the U.S. Army Environmental Hygiene Agency arrived to develop noise contours for present and future conditions (time periods of 1980-82, 1982-84, 1984-90, and 1990-2000) including projected effects from the addition of a 120 mm gun. In September 1982, representatives (DEH, SJA, PAO, and DPT) from Fort Knox attended an ICUZ workshop at Fort Campbell to acquire a basic understanding of how the ICUZ program is designed to address legal and community relations and to reduce noise conflicts. In May 1983, TRADOC personnel delivered a formal executive briefing to the Commanding General, Fort Knox.

Beginning with a 3-day TRADOC sponsored workshop in August 1983, the ICUZ study gained intensity. The workshop, a community involvement training course held at Fort Knox, was attended by persons from several functional elements: DEH, PAO, SJA, DPT, MEDDAC, PMO, OEO, Armor School, Armor Engineer Board, the Safety Division and the local Corps of Engineers office. This workshop provided training on: community involvement techniques, negotiating agreements, organizing an interdisciplinary team, and installation responsibilities in the ICUZ process. Specific concerns were also raised regarding data used to develop the Fort Knox contour for the year 2000:



terrain effects on noise, the type of 120 mm round to be used, and the number of 120 mm rounds to be fired in the year 2000.

The workshop attendees formed an ICUZ committee which met six times. Over the course of these meetings, the committee established some community involvement milestones which were approved by USAARMC Chief of Staff, and identified ICUZ goals and responsibilities (Appendix E). The committee also prepared a list of groups they wanted to participate in the ICUZ process (Appendix E). The list included local and regional planning commissions, the judge executives from several counties, mayors from all surrounding communities, state and federal representatives and realtors. Subsequently a 3-member subcommittee was formed and made the actual contacts in the community. The subcommittee included two persons from DEH (Tom Hutchins and Joe Yates) and one from PAO (Scott Saunders).

From 14 February to 15 April 1985, the ICUZ subcommittee delivered 10 briefings with visuals, handouts, and noise contour maps, to city officials and local and regional planning commissions. At each briefing the subcommittee described the noise contours and the effort being made to open channels of communication between Fort Knox and the surrounding communities and attempted to point out the mutual benefits of cooperating on ICUZ. Specifically, that planning commissions cooperation in slowing or halting growth at or near installation boundaries could enable Fort Knox to continue its training mission and that the surrounding communities could continue to enjoy the economic benefits of a healthy Fort Knox. If such cooperation were not possible, the ICUZ committee asked planning commissions to at least

consider the implications of development in areas proximate to the installation prior to allowing it to happen. In turn, the officials explained their role in land usage and planning for the areas involved and gave information concerning who to contact in the various areas. Unless provided earlier, these meetings presented an opportunity for community leaders to furnish the ICUZ committee with zoning regulations, maps, the comprehensive plan and other such materials.

To date the team has completed a draft report of the study and has also prepared a draft Memorandum of Agreement which is generic enough for any of the surrounding communities to sign.

### III. IMPACTS OF THE ICUZ STUDY

#### A. Impacts in Terms of Objectives

##### Objective 1: Achieve Changes in Community Land Use.

Achievement of this objective may be measured in terms of perception of key participants and agreement reached on land uses (Table 1).

According to the public officials interviewed at the close of the ICUZ study, no land use changes had yet occurred because of the ICUZ study and none are contemplated. However, planning commissions do plan to consider ICUZ noise zones in their review of development proposals. For example, in one instance preliminary approval has been issued for a small low density development in an area adjacent to but outside a Zone II contour and the planners intend to discuss this with the ICUZ team.

Fort Knox has drafted a Memorandum of Agreement (Appendix F) which formalizes a mechanism for information exchange and mutual coordination for noise impact reduction.

##### Objective 2: Create Public Image of Installation as a Good Neighbor.

Public image as denoted by community attitudes, noise complaints, correspondence, and inclusion of installation in local activities is best discerned by monitoring over time (Table 1). However, at this time some gauge of the installation's public image can be gained from the comments made by community leaders.

Each of the local officials interviewed for this evaluation were satisfied with their level of participation. They were more than pleased that Fort Knox had initiated the contact, and had sought their input. ICUZ, enabled them to identify communication channels and they now see the installation as a group with which they can work on matters of joint concern. They respect the installation's willingness to openly admit that noise is a problem and to work with them to keep the public informed.

Objective 3: Reduce Conflict Over Noise. Assessing this objective is fairly straightforward since it is evident in the number of Congressional inquiries, citizen complaints, and litigation (Table 1). However, knowing whether or not this objective has been attained and maintained at a particular installation would require establishment of a historical baseline and follow-on monitoring.

While there have been complaints about noise and even one concerning a stray-shell landing, installation officials feel that the number of complaints in itself is not indicative of a significant noise conflict. At Fort Knox, and probably at other installations as well, the issue of noise conflict is complicated by the economic dependence of local communities, distance from the installation, and terrain. Thus, although Radcliff is close to Fort Knox and unprotected by terrain the public there sees the installation-generated noise as a way of life which they accept because of the economic benefits afforded by association with Fort Knox. While Shepardsville is not economically dependent, complaints are few because it is somewhat protected by a ridge and

is further away. By comparison, Lebanon Junction is fairly close, is unprotected, and has little economic dependency on Fort Knox. Most noise complaints are received from this community.

None of the interviewees thought that ICUZ would have much, if any, impact on noise conflicts. Fort Knox officials agree with the views of local officials. Installation officials feel that the study could provide legal support if noise becomes a problem in the future.

Objective 4: Install Policy for Noise Creation. The ICUZ study had clear results in this objective. For example, computer-generated projections of the impacts of the 120 mm gun were a factor in the installation decision to reduce the number of 120 mm guns planned. Also, as a result of ICUZ, Fort Knox plans to update data on noise parameters impacting the public and to provide this to local land-use planning agencies so that they can use the data in their planning.

Objective 5: Create Open, Visible, and Traceable ICUZ Process. The ICUZ process is actually an ongoing mechanism set in motion by the ICUZ study. Achievement of this objective then is partially accounted for by the establishment of the process mechanism. The approach taken in the ICUZ process at Fort Knox is regarded favorably. It seemed to fit into the general community interaction framework already established and to enhance the already good community relations. ICUZ has helped improve communications between installation personnel and the local officials. For example, the study prompted planners in Radcliff to call personnel at Fort Knox to discuss

planning and zoning matters that might impact on Fort Knox. The ICUZ process not only opened new channels of communication, but also reinforced the existing links.

#### B. Impacts on Operational Changes

ICUZ brought about several operational changes. First, procedures for logging complaints have been modified to establish a central contact point: orders were written requiring that all complaints from the public be referred to the PAO. Second, the original plan to convert all 105 mm guns to 120 mm by the year 2000 was modified to a 10% conversion. This effectively reduces the projected Zone II and Zone III areas. Costs were a factor in this modification but so was the visual display of the projected noise contours. Another change that is planned within the next 5 years is the relocation of the major impact area and the relocation of some firing points from the southern sector of the base to the northern section. The movement of the impact area is expected to decrease noise contours because there is a mountain range involved between the old and new. This should effectively reduce or eliminate the Zone II noises leaving the base to the east. Moving the firing ranges may reduce noise Zone II contours to the southeast, particularly in Lebanon Junction.

#### C. Issues, Concerns, and Reactions

This section examines issues, concerns, and reactions of those who participated in the ICUZ study, either on the ICUZ Committee or as a point of contact for the public.

1. Interaction with the Public. Although the ICUZ model provides for public meetings, Fort Knox did not hold any. The papers did carry a news release on the ICUZ study but there was no inquiry or comment from the public. Initially it was planned to invite the public to take part in the process via public meetings; however, based on information obtained from briefings with local officials, it was decided that there was no need for public meetings. Basically, these officials felt that the public was not sufficiently concerned about noise to warrant a public meeting. The small number of noise complaints was also taken as being indicative of a lack of public concern. ICUZ team members as well as community leaders felt that public meetings could be counterproductive in that they would cause undue worry among the general public. An extreme expression of this concern was voiced by one commission chairman who was feared that public interaction in an ICUZ study at Fort Knox would advertise a concern for noise and "choke off" growth. There was also some concern that a public meeting would provide special interest groups an opportunity to distract from the purpose of the meeting by creating a forum for raising other issues besides noise. This concern applied particularly to Lebanon Junction, a community that is somewhat antagonistic to the Army and to Shepherdsville where one meeting participant took the opportunity to raise issues that had nothing to do with noise or Ft. Knox.

Fewer briefings were held with local officials than originally planned. This change was made possible because of a reduction in projected future noise zones in Zones II (normally unacceptable) and III (unacceptable) which was brought about by a decision to reduce the use of the new 120 mm main

gun on the Abrams battle tank. Conversely, at least one unplanned briefing was held because a public official requested it.

In follow-up, those public officials who were interviewed said they were satisfied with their level of involvement and appreciated the opportunity to participate.

2. ICUZ Team Formation and Composition. It was difficult to define the appropriate people to be on the team. The first 2 or 3 meetings spent some time discussing who should be there. Apparently, at each successive meeting the representatives were from higher levels within their units until a decision maker was reached. Presumably this happened because the coordination and level of importance attributed to the ICUZ process were not significant enough to focus command level interest. Ultimately, several functions were represented by their second-in-command. Of the people who attended the ICUZ training workshop, only three (two representatives from DEH and a representative from PAO) remained involved throughout the process. Other representatives who attended the training session felt that they were not the appropriate ones from their element to participate in the study. For example, one training attendee was within a few weeks of retirement.

Difficulties in obtaining sufficient interest and priority from top management can hinder the ICUZ process because it affects how smoothly the public involvement progresses. ICUZ team members may be hesitant or constrained in interacting or negotiating with community leaders if their command support is weak.



3. Noise Complaints and Noise Monitoring. Because of repeated personnel turnover, Fort Knox does not have a reliable accounting of noise complaints received. Complaints received included some from civilians who lived almost directly across from some heavily used training areas. Their primary concerns were about track vehicles. A resident in a trailer near the main artillery impact area complained about chronic noise and vibration. Also, a County judge wrote about complaints he had received, mainly from the Lebanon Junction area, and he registered concern for stray shell landings. Fort Knox estimates that it receives about one complaint per-month, with no noticeable change since the ICUZ study. However, as noted in a previous section, one impact of the ICUZ process has been to establish the PAO as the central point of contact for receiving complaints.

As for noise monitoring, the ICUZ process coordination and recognition of its level of significance were not realized high enough in the command level to successfully achieve a suitable noise monitoring test. For example, it was not possible on two occasions to have requested guns firing from specified ranges on requested days despite ample advance warning. The range control people felt that the noise monitoring team should have been more flexible and perhaps been willing to monitor noises on weekends and at night as this is when a great deal of the training occurs.

4. ICUZ Technical Aspects. ICUZ team members expressed some concern about the reliability of the noise contour information. Even though the methodology has been endorsed by the National Academy of Sciences and is recognized as being "state of the art", there are problems with the

methodology. For example, the procedure does not take into account the influence of terrain features in dampening or amplifying noise. In addition, Fort Knox experienced difficulty in attempts to obtain actual sound tests to verify or dispute computer-generated information. Also, ICUZ does not differentiate impulse noise from steady noise. For this reason the reports of noise levels realized over time can be misleading because the averaging of actual noise data over time to produce contours screens out infrequent, but very annoying noises.

Another concern about noise contour information is how to convey the technicalities of the noise contouring process to the general public, particularly any who may be annoyed by military operations in general. The technical procedures and results are useful to ICUZ teams and to community planners, but perhaps need to be reformatted or explained in different ways to be effectively communicated to the public.

Finally, there is some question as to whether reasonable estimates of future noise levels can really be made. The focus of ICUZ is on the future and the goal is to negotiate to prevent occurrence of conflicts between installation noise and future community land use. The problem is that noise projections are generally made on the basis of expected normal growth and technological changes in weapons; there is no accounting for the significant increases that could occur in any level of mobilization. In addition, because of national defense reasons, the Army can not disclose its future weapons plans very far in advance. This can affect credible, good-faith negotiations with communities.

#### IV. ASSESSMENT OF THE PROCESS

##### A. Strengths

Major strengths lay in increased communications, increased command support, and the higher priority given to the noise problem. ICUZ helped to sensitize people, both on and off the installation, to noise concerns. The program enabled Fort Knox to take actions that it knew should be taken, but either wasn't sure how to go about doing or didn't have the time to do. In this way, channels of communication were opened and Fort Knox representatives met and talked with people that they otherwise might not have. A major strength of the ICUZ study rests in the meetings held with local and area planning agencies. The meetings produced a desire, by all parties, to develop a working relationship for managing noise impacts and reduced the probability of the occurrence of noise conflicts. The net result and key outcome of the ICUZ study is that it established a mechanism for Fort Knox to work with surrounding communities when and if problems arise, including problems other than noise. As a consequence, the installation also feels it is in a comfortable position for facing any possible legal actions related to noise.

##### B. Weaknesses

Some of the weaknesses that were evident at Fort Knox might not occur at other installations. For example, in retrospect, the study was somewhat weakened by having been initiated before final reliable noise contour information had been developed. In the early stages, all the necessary noise

contours had not yet been collected and assimilated so there had to be a repeat of meetings and changes in contours. This made it difficult to give convincing presentations to public officials. This was also a factor in causing the study to last longer than originally anticipated.

Another weakness was the difficulty in assembling an ICUZ team. Problems rose in identifying the appropriate people and in recognizing roles. Team carry through was also a problem; few of those who attended the TRADOC training continued with the team. This may have been more of a problem with the implementation of the process than with the process itself. At Fort Knox, this problem was aggravated by the fact that people with sufficiently high command/management authority either were not involved or did not delegate authority early enough in the process.

ICUZ team members also reported certain technical problems that other installations may expect. Problems with representing impulse noise have already been discussed in the text. Another problem arises when the public asks how to construct to reduce noise impacts, for example, how to satisfy an ICUZ recommendation to reduce noise by 20 db. However, state-of-the-art technology is not yet well enough advanced to be able to relate soundproofing features to noise zones or to the level of noise reduction they can effect. ICUZ members felt somewhat inadequate in not being able to provide information on how to achieve certain recommendations for noise reduction. Another technical weakness is that the ICUZ process does not address existing development. This may alarm people who had become used to the existing noise and cause them to become concerned about their future

property values. Thus, there was a fear that the process might "kick a sleeping dog" and create problems where none had existed before the study was initiated. If a concerned public becomes aroused enough, they might decide to seek legal action against the installation.

### C. Suggestions and Lessons Learned

Most significantly, the experience at Fort Knox demonstrates that an ICUZ study can be successfully done. It also points up lessons learned that may be useful for others to consider in planning for their own ICUZ study.

1. Importance of Communication. In developing and implementing the ICUZ study, the overall lesson learned is the importance of communication, both within the installation and between the installation and the surrounding communities.

In developing the ICUZ study, communication among elements of the installation must be focused on commitment to ICUZ goals. This is based somewhat on command support and level of priority. Had this been stronger in the initial stages at Fort Knox, the ICUZ process would have been smoother. At Fort Knox the problem was partially related to the diverse mission, which may or may not be a factor at other installations.

In implementing the study, communications with the public are important. This is evidenced by the positive reaction of public official in the Fort Knox experience. They appreciated Fort Knox being upfront with the

noise problem and including various local agencies in the process. Without a good cooperative effort with the public, as based on successful interaction, ICUZ goals are seriously jeopardized.

## 2. Importance of ICUZ Team Composition and Consistency

The Fort Knox study points out how commitment and communication within an installation can influence how quickly and smoothly an ICUZ team is assembled. The importance of getting the appropriate people and getting their dedicated time not just for the overall period but also for availability at a given time is important. Unless the team is made up of competent people from the right elements and with the appropriate level of authority, ICUZ participation and community involvement are hindered with subsequent adverse impacts on ICUZ goals. As a training installation, Fort Knox found four personnel positions to be critical to the ICUZ team: 1) from DEH, the environmental officer; 2) from DPT, either the deputy or the executive officer; 3) from PAO, the PAO or deputy; and 4) from SJA, a lawyer who is assigned to ICUZ. A high-level DPT representative will be a key player at training installations since the team will need considerable information on training; at FORSCOM installations, the DPT role may not be as important.

As it turned out at Fort Knox, it worked well to have a subcommittee of two from DEH and, one from PAO. These people did most of the work and made most of the decisions but kept in contact with the larger committee for informational and guidance purposes. Having a small active core group was more efficient for everyone concerned. For one thing, the fewer the number

directly involved, the fewer the schedule conflicts and other logistical problems.

Consistency in team composition is also important; having the same individuals involved throughout facilitates progress and study continuity. Including decision makers, or at least persons who directly influence decision makers, on the team is strongly recommended. However, because of the extended period of time over which an ICUZ study is conducted, personnel changes can be expected especially among the military. Efforts should be made to assign military personnel who have sufficient time for completing the study before the scheduled rotation.

### 3. Importance of Training Tailored to Site Needs

ICUZ training for Fort Knox personnel did not prepare them for the overall program. In retrospect, participants in the ICUZ study did note a few suggestions for improving the training course, primarily that it be more site oriented and more specific on requirements. The training they received seemed too hypothetical and suited to a big city situation. More discussion on relationships common to rural settings would have been helpful. Participants felt that more time should be spent on specific problems of the installation and on helping the group focus more on planning aspects and mechanisms of the process. While amount of training on community involvement techniques seemed appropriate, the course did not sufficiently address the ICUZ process: what was needed was specifics on how to accomplish it and what was expected to be produced, i.e. what reports and in what format. Much of this kind of

information had to be ferreted out by the ICUZ team during the course of the study. (Since its delivery at Fort Knox, changes have been made in TRADOC ICUZ training. The course has been lengthened from 3 days to 5 which allows more time to be spent on mechanisms of the ICUZ process, planning in ICUZ study, and specific team problems.)

4. Importance of Obtaining Accurate Noise Information. Suggestions were made that more data and particularly more reliable data on noise and the consequences of noise be collected and made available. For example, what impact does a Zone II or Zone III have on an individual; are there physical or health problems, etc. There is also a need to account for sudden explosions and their impacts as opposed to overall averages. It was suggested that many of the questions on noise impacts could be answered by undertaking a study on the installation to take sound readings over an extended period of time and to determine which units generate the greatest amounts of noise. Using this information, a model could be developed to generate noise contours based on adding new missions or deleting certain mission or types of firing. As for noise test scheduling, the Range Scheduling Officer suggested that some consideration be given to the installation when scheduling noise tests. He stated that having a special unit fire on a particular range at a particular time can be costly and difficult to arrange. This relates back to the priority placed on ICUZ and coordination problems. Basically, the noise measurement team needs to be more flexible and to work with the installation. There is a need to take measurements of demolition explosions and consider working on weekends since a lot of firing, particularly by reserve units, typically takes place then.



5. Comment on Assistance. Conducting an ICUZ study requires a significant amount of effort. While it is not a full-time job for the people involved, there are periods of time when it may seem that way and other regular duties must wait. Consultants are available for assistance, in fact TRADOC did offer Fort Knox the services of a consultant. However, Fort Knox did not take advantage of this because it was reluctant to have a consultant do work which it itself was unsure of how to do. Feeling comfortable about engaging a consultant for assistance in an ICUZ effort is a function of the installation's personality, prior experience with consultants, and level of understanding of the ICUZ process.

6. Comment on Role of PAO. In hindsight, the PAO should have had a larger role in the Fort Knox study. Instead, the Environmental Officer took an early lead in taking study leadership, so setting the pattern for conducting the study. Were he to do an ICUZ study again, the environmental officer would delegate more to the PAO since they are the public relations function. That this was not done may reflect the inadequacy of ICUZ training at Fort Knox. The environmental officer kept a close hold on the efforts and did a lot of work that PAO is better suited to do because he felt uncertain about the process; the rationale being that the fewer the number of people going off to work on something not well understood, then the less the likelihood of serious problems. It is impossible to advise on how much responsibility PAO should have in an ICUZ study. This will vary with the installation and the personalities involved.

D. Summary

This evaluation of the first application of the TRADOC ICUZ-CI process identifies several points that are of interest to other installations in setting up an ICUZ-CI study. Consideration of these points should be helpful in facilitating such a study and ensuring its success.

- o Before undertaking the study, obtain:
  - accurate and reliable noise contour information
  - sufficient command support and interest
  - complete understanding of the process and the study requirements
- o Upon initiating the study,
  - assemble an effective team, i.e. competent and responsible persons from the appropriate elements and at an appropriate level of management who will be available throughout. Consider the idea of an active working sub-group that periodically reports to the larger committee.
  - establish goals, responsibilities, and a schedule
- o Throughout the study maintain
  - communications within the installation
  - communications with the communities involved

Table 1

ICUZ Objectives and Performance Indicators

<u>Objective</u>	<u>Indicators</u>	<u>Measurement Process</u>
1) Achieve changes in community land uses	Measureable alterations in community land uses	Observe nature of agreements reached  Interviews at culmination of process with key participants
2) Create public image of installation as a good neighbor	Community attitudes; number and nature of complaints, Congressional inquiries, official correspondence from communities, interest groups, agencies; extent to which installation participation in local activities is sought	Use secondary sources to establish a baseline, monitor over time.  Conduct interviews with community leaders at completion of process.
3) Reduce conflict over noise	Number and nature of threats of litigation, Congressional inquiries, citizen complaints, other general complaints, (i.e. non-noise).	Establish historical baseline and monitor
4) Create open, visible and traceable ICUZ process	Degree of public trust in planning process  Traceability of public inputs  Use of information exchange in process	Interviews, questionnaires  Accounting  Accounting, evaluation of effectiveness of specific techniques and approaches by publics
5) Install policy for noise creation	Attention to noise impacts of projected firing program.	Consideration of predicted impact zones and adjustments in firing locations, times, or amounts.

Table 2

Framework for Audit Trace

1. Number of noise complaints received in 12 months prior to initiation of ICUZ study:

Category,	Number,	Location	Issue(s)
Citizens			
Interest Groups			
Congressional			
Community Govt			

2. Number of noise complaints received since initiation of ICUZ study:

Category,	Number,	Location,	Issue(s)
Citizens			
Interest Groups			
Congressional			
Community Govt			

3. Team activities and chronology of study:

Date Activity	Product	Comments
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4. Public contact and interaction

Date Public	Study Stage Info.	Provided TO	Info. Received FROM
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Disposition	Traceability
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**Table 3**  
**Communities Neighboring to Fort Knox**

<u>Community</u>	<u>County</u>	<u>Population, 1980*</u>	<u>Noise Zone,** 1983</u>	<u>Noise Zone,** 2000</u>
Lebanon Junction	Bullitt	1,581	I & II	II & III
Muldraugh	Hardin	1,752	I	II
Radcliff	Hardin	14,519	I & II	II & III
Shepherdville	Bullitt	4,454	I	II
Vine Grove	Meade	3,583	I	I & II
West Point	Hardin	1,339	I	II

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\*\* Zone I - unacceptable  
    Zone II - normally unacceptable  
 \* Zone III - unacceptable  
    1980 census or latest estimate

# 1983 FORT KNOX AND VICINITY

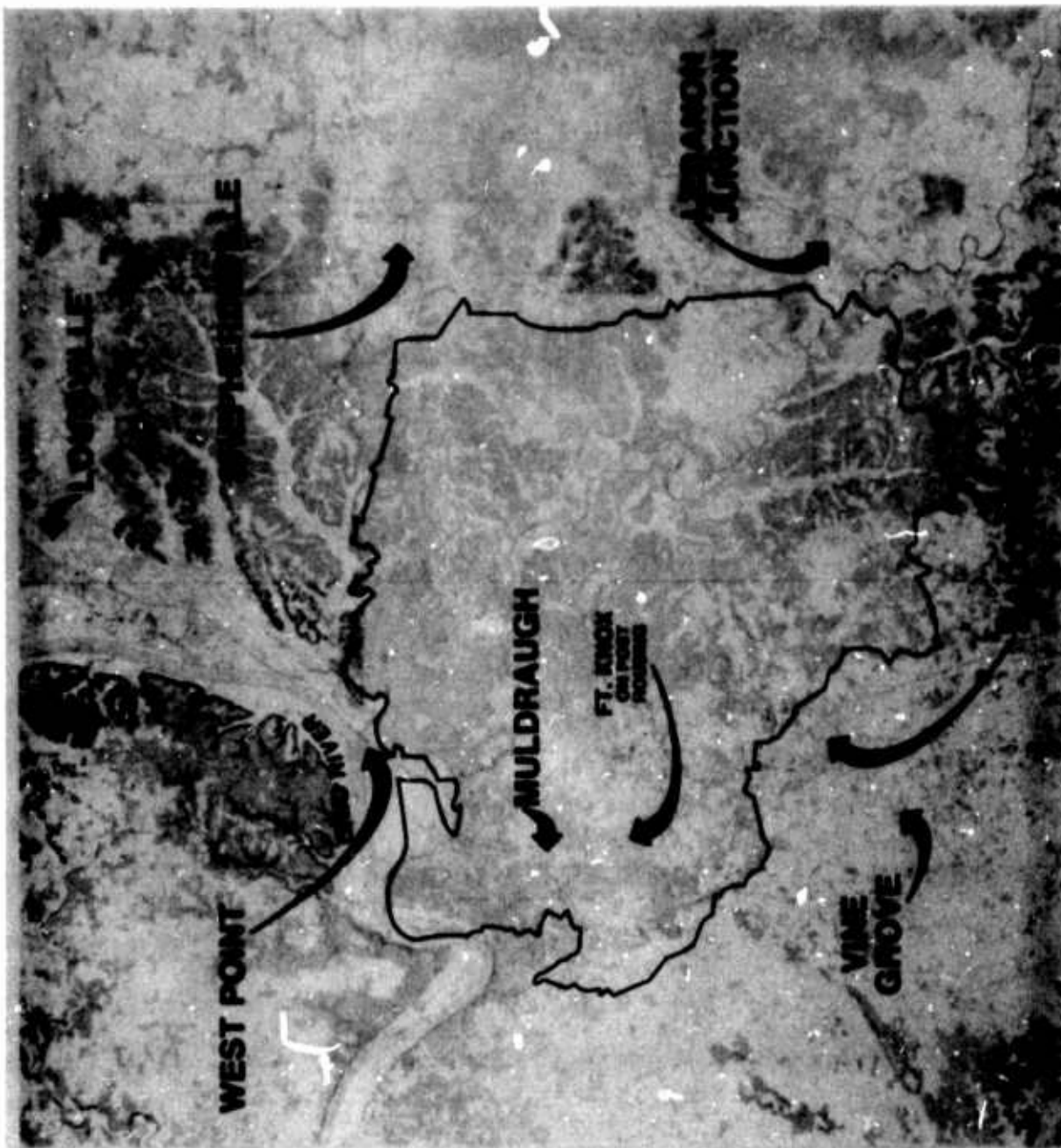


Figure - 1 - The Study Area

# 1983 FORT KNOX AND VICINITY

NOISE ZONE  
OVERLAYS

NORMALLY  
UNACCEPTABLE

UNACCEPTABLE

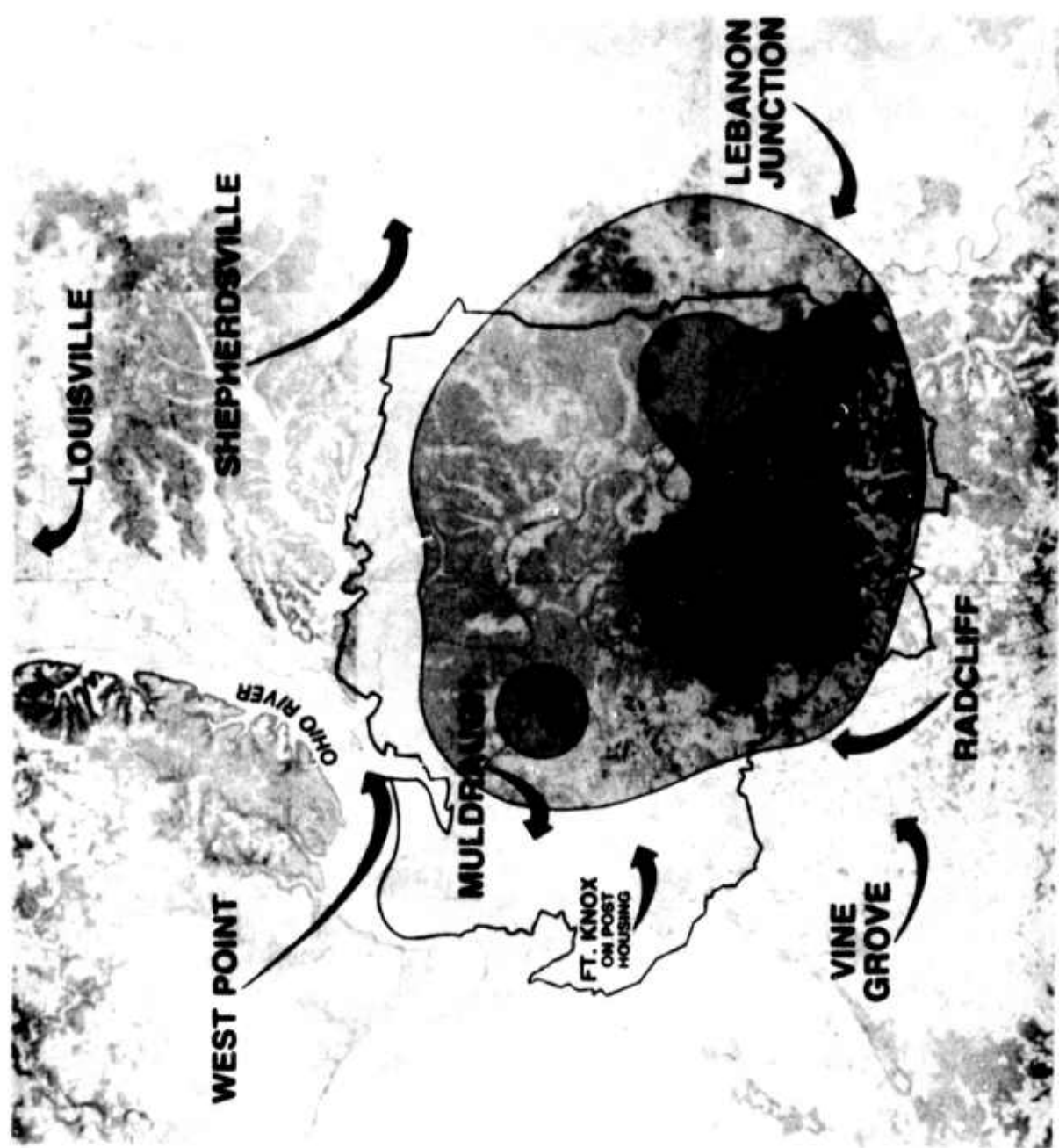


Figure 2 - Noise Contours, 1983

# 2000 FORT KNOX AND VICINITY

## NOISE ZONE OVERLAYS

NORMALLY  
UNACCEPTABLE

UNACCEPTABLE

PROJECTED  
DEVELOPMENT

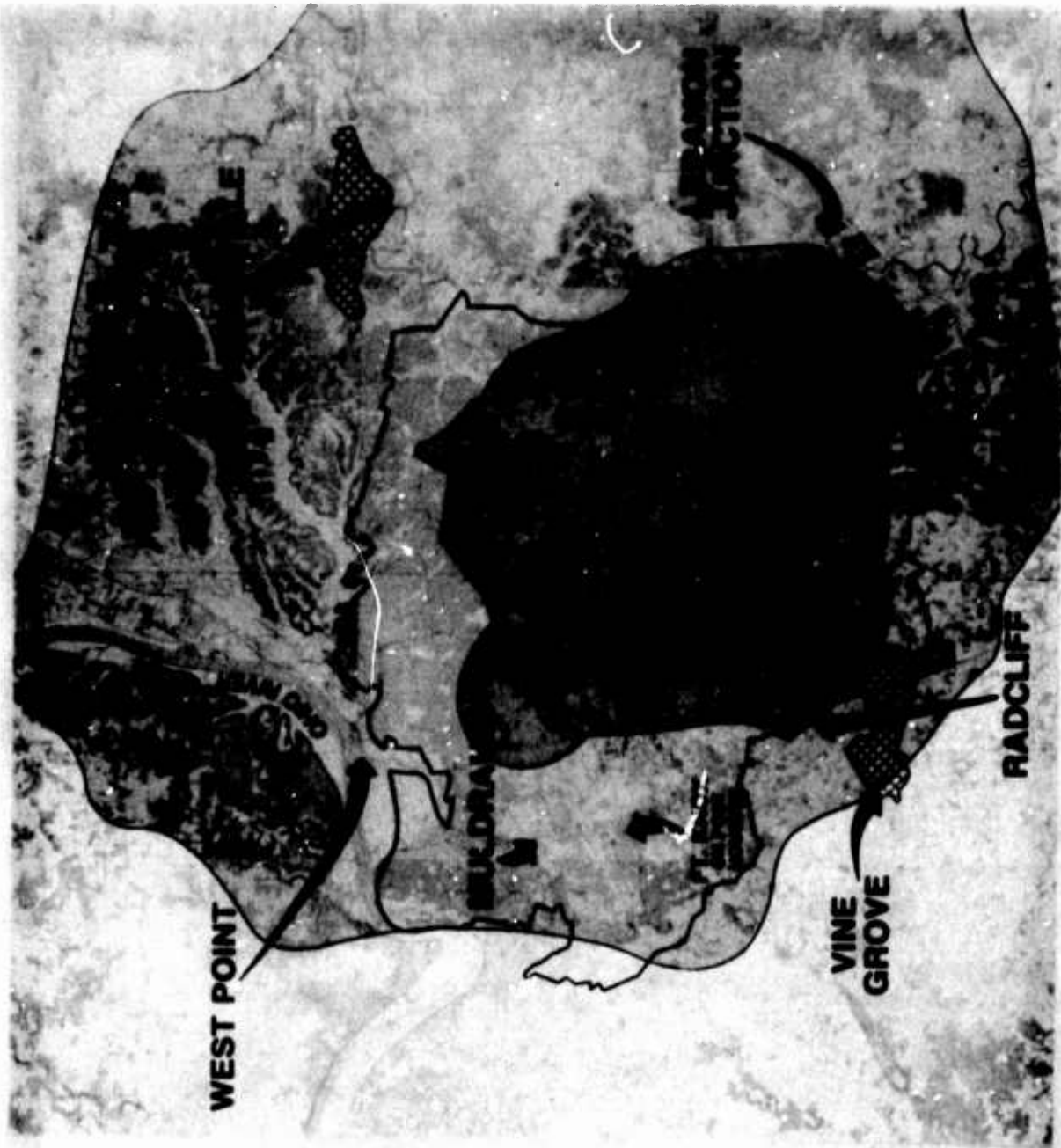


Figure 3 - Noise Contours, 2000



## APPENDIX A

### ICUZ STUDIES AND COMMUNITY INVOLVEMENT\*

Installation Compatible Use Zones (ICUZ) is the name given to a study process in which an analysis is made of noise generated by Army activities — such as artillery, explosives, vehicle movement, aircraft — and the impact of this noise on the surrounding community. Present and future incompatible land uses on lands adjoining the installation are identified, and an effort is made to negotiate joint agreements with local communities or other agencies to prevent or minimize these incompatible uses.

The purpose of ICUZ is to prevent degradation of the installation's mission due to political controversy and litigation over noise impacts, while at the same time protecting the health and safety of the local community.

The ICUZ process is proactive in that it not only assesses current uses of adjoining land which are not compatible, but also assesses land use patterns which could lead to conflict in the future. ICUZ not only looks at current activities on the installation, but considers the noise impacts which could occur with the next generation of weapons or maneuvers. Instead of waiting for controversy, the ICUZ process attempts to take steps NOW to prevent these conflicts from becoming unmanageable.

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From: Installation Compatible use Zone (ICUZ) Community Involvement Manual  
prepared by James L. Creighton for the U.S. Army, TRADOC, Fort Monroe,  
Virginia.

The ICUZ study process also fulfills the Army's obligations under the Noise Control Act of 1972. The Assistant Secretary of the Army for Installations, Logistics and Financial Management has directed that the Army complete the bulk of its obligations under the Noise Control Act by FY 1987.

#### Steps in the ICUZ Process

The TRADOC ICUZ-CI study consists of the 9 steps listed below. It differs from the "basic" 8-step ICUZ study in that it emphasizes continued interaction with communities, agencies having some control over land uses in noise impacted areas, and in the explicit requirement to attempt to develop memoranda of agreement between the installation and such entities which specify actions each party intends to take to help manage noise incompatibility.

The ICUZ process which will be followed for TRADOC installations includes these steps:

1. Identify noise-impacted areas.
2. Identify existing or potential incompatible land uses.
3. Identify alternative actions to minimize noise impacts.
4. Evaluate alternative actions.
5. Negotiate draft agreements with local communities and agencies.
6. Submit draft agreements for review by decision makers.

7. Public final report describing agreements and technical documentation.
8. Implement agreements.
9. Update and review.

At each of these steps there will be opportunities for community involvement.

## APPENDIX B

### PARTICIPANTS AND CONTACTS

#### A. Fort Knox (Persons who attended at least one ICUZ Committee Meeting).

Charles Brambley, Safety Management Division, DPCA

SFC Brown, OEO

SFC Joseph T. Bryant, DPT Range Division

SFC Charles E. Christian, 1st Bde

WO1 Charlie W. Deittericic, DPT Aviation

Paul Frye, Installation Master Planner, DEH

CPT John Hall, Prev. Med., MEDDAC

Kirby L. Hunter, Wpns Dept., USAARMS

\* Tom Hutchins, Chief, Environmental Management Division, DEH

CPT Pamela Kontowicz, SJA, Environmental Law Officer

MSG Willie R. Lockhart, S3 194th Bde

L. E. Potter, Safety Division, DPCA

\* Scott Saunders, Deputy, Public Affairs Office

Van Smith, Environmental Management Division, DEH

SFC Dave Stanley, OEO

\* James Vischer, DPT Training, Range Scheduling Officer

MAJ Mitchell Willis, Executive Officer, DPT

Joe Yates, Environmental Management Division, DEH

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(Note: the ICUZ Subcommittee consisted of Tom Hutchins (DEH), Joe Yates (DEH), and Scott Saunders (PAO). This was the group that contacted community leaders through a series of briefings.)

B. Local Officials

1. Lincoln Trail Area Development District (LTADD) in Elizabethtown.  
The LTADD does planning for Maldraugh, Vine Grove, Meade County and others who do not have a planning department.

\* Jim Sparks, Advisor

Wendell Lawrence, Advisor

2. Kentuckiana Regional Planning and Development Agency in Louisville

Joann Whitlock

Jessie Daniels

Joe Schoenbaechler

3. Housing and Urban Development in Louisville

Lowell Payne

Tom Hall

4. Bullitt County

Lynn Martin, County Planning Commission, Shepherdsville

\* Judge Clifford Haley, County Judge Executive

Sandy Larimore, Acting Staff Planner, County Planning Commission

5. Hardin County

Dennis Gordon, County staff planner, in Elizabethtown.

6. Radcliff

\* Paul Tice, City Planner

\* Ladislav Novak, City Engineer

\* Bill Mahanna, City Council Member

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\* Indicates persons interviewed for this evaluation. Altogether, seven interviews were conducted (Tice and Novak were interviewed jointly).

## APPENDIX C

### QUESTIONS FOR GUIDING INTERVIEWS

#### Questions for Community Leaders and Others Identified as Having Participated in ICUZ

1. What was the nature of your participation in the study process?

What information was sought from you?

What information was provided to you? How was it provided?

What information did you provide?

2. How satisfied are you with your level of participation in the ICUZ study?

If unsatisfied: Why? What is most important in forming your opinion?

3. The intent of the ICUZ study approach was to establish a way for the installation and local communities to jointly work together on noise and land use management problems. In what ways do you feel that the ICUZ study achieved this goal?

In what ways do you think this goal was not achieved or could have been better attained?

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4. What land use changes took place or are now being contemplated as a result of the study?

5. What impact do you feel the ICUZ study will have on noise problems in your community?

6. [If MOA not achieved] in your judgement what were the major reasons MOAs were not reached between the installation and the communities?

7. How has your attitude about Ft. Knox changed as a result of the ICUZ study?

8. ICUZ studies are being conducted at other Army Installations, what advice for improving these studies could you provide based on your experiences?



### Questions for ICUZ Team

1. What operational changes took place as a result of the ICUZ study (could also include procedural changes)?

2. How often did you meet as a team? Was this about right, too little, too much?

3. What was the biggest problem in interacting with the public?

4. In comparing your study with the "model" presented in the manual and the training course what was the biggest deviation from the ICUZ process as presented? Why did the deviation occur?

5. What impact do you feel the ICUZ study will have on noise conflicts?

6. The intent of the ICUZ study approach was to establish a way for the installation and local communities to jointly work together on noise and land use management problems. In what ways do you feel that the ICUZ study achieved this goal?

In what ways do you think this goal was not achieved or could have been better attained?

7. What do you feel are the major strengths of the ICUZ approach?

(Is this a strength of the "model" process or the approach as it was applied at Ft. Knox)

8. What do you feel are the major weaknesses of the ICUZ approach?

(Is this a weakness of the "model" process or the approach as it was applied at Ft. Knox)

9. What suggestions do you have for improving the ICUZ process?

## APPENDIX D

### CHRONOLOGY OF EVENTS AT FORT KNOX

January 1982 - US Army Environmental Hygiene Agency arrived at Fort Knox to gather data. Purpose was to:

- 1) Provide noise contours for long-range planning
- 2) Study the long-range effects from the addition of the 120 mm main gun firing

During 1982 the first set of computer-projected noise contours for the 120 mm gun were developed.

September 1982 - Representatives from Fort Knox attended an ICUZ workshop at Ft. Campbell. Offices represented included: DEH, SJA, PAO, and DPT.

Purpose of training was to provide some insight as to where Fort Knox is going and how to use the ICUZ program to reduce further conflict. Training also addressed legal and community relations problems.

February 1983 - Executive Briefing given by TRADOC to Commanding General of Fort Knox to explain ICUZ-CI study approach.

24 - 26 October 1983 - A TRADOC-sponsored community involvement training course was held at Fort Knox.

The following Fort Knox organizations were represented: DPT, PAO, SJA, DEH, MEDDAC, PMO, OEO, Armor School, Armor Engineer Board, and the Safety Division. The course concentrated on community involvement techniques and the thought process in developing a community involvement program. The Chief of Staff was outbriefed the last day on details of the course.

During the training course, numerous representatives expressed concern over the data used to develop the Fort Knox noise contours for the year 2000.

Specifically, 3 major concerns: (1) the terrain effect on noise, (2) the type of 120 mm round to be used, and (3) the number of 120 mm rounds to be fired in the year 2000. Revised firing rate data and terrain data will be used to generate contours by the hygiene agency in late FY 84.

An ICUZ Committee with representatives from 10-12 functional elements was formed.

13 December 1983 - ICUZ Committee met:

Initial meeting. Committee discussed Fort Knox approach to the ICUZ program and outlined responsibilities for the first two steps of the process (initial community notification and identifying incompatible land uses). Also discussed who should be on the Committee.

10 January 1984 - ICUZ Committee met:

It was decided that the purpose of the committee is to implement the ICUZ program and insure that Fort Knox can continue to perform its mission.

The Committee's mission is to publish the ICUZ report describing agreements.

The first goal was to purify the data used by the USAEHA to develop the noise contours. DEH is to request DPT review and purify this data.

The second goal for the meeting was to decide on steps to formalize the committee and its members. It was decided that DEH should staff a Fort Knox circular which will include the committee's purpose, mission, and representatives.

The committee also decided to request AEHA provide Fort Knox the computer program which generates noise contours.

Action: DEH.

Other goals identified but not addressed were: Identify community involvement for each step of the ICUZ process; identify responsibilities for each step; determine milestones; have regular meetings with minutes distributed to major commands/tenants/directorates.

24 January 1984 - ICUZ Committee met.

Actions of last meeting were reviewed. DEH reported that the letter requesting DPT to review and purify data had been sent; the letter to formalize the committee was being staffed; AEHA had been questioned about possibility of providing Fort Knox the contour computer program. AEHA responded that the program belonged to CERL. CERL was called: Per CERL, the program could be accessed on a time share basis. Cost - unknown. The program is on a computer belonging to Boeing in Seattle, Washington. Training to use the program is extensive. Discussion followed. It was decided to touch with AMO and get their input before going further. Action: DEH.

Committee decided would only attack existing Zone II and III.

The committee discussed existing incompatible areas within the existing Zone II. Suggested that these be identified before Commanding General's briefing. Action: DEH.

DPT was asked to consider planned ranges north of the Salt River when purifying firing data. Action: DPT.

The first public meeting was discussed. Who should attend, type of meeting, and who should run the meeting - PAO or DEH, were some questions discussed but not finalized. The list of people to invite was generated. It was agreed, that at least two meetings should be held, breaking up this list into two groups.

PAO agreed to provide DEH a news release and a rough outline for the first public meeting before the Commanding General a briefing. The milestone chart was developed.

Late 83 to early 84 - Splinter group subcommittee was formed. Group consisted of: Tom Hutchins, DEH; Joe Yates, DEH; and Scott Saunders, PAO.

2/84 to 4/85 - Subcommittee made actual contacts in the community through a series of briefings which are chronologically inserted in this listing.

3 February 1984 - ICUZ Committee met.

Steps of the ICUZ process and previous committee actions were reviewed.

Committee reviewed goals and assigned each to a responsible party.

The milestones were reviewed. Changes are noted on attached milestone chart. Responsible parties were also assigned.

TRADOC's requirement for a public Involvement Plan was discussed. The committee agreed that PAO would draft a plan and present it at the next meeting for comment. TRADOC suspense is 22 February 1984.

The committee discussed the use of a public involvement consultant. Action was put on hold.



13 February 1984 - ICUZ Committee met.

DEH reviewed the results of meetings with the Chief of Staff and Commanding General. In general the committee direction did not change as a result of those meetings. The committee was informed on the first public meeting to be held with representatives from the Lincoln Trail Development District. This meeting was scheduled for 14 February 1984. Records of meeting will be maintained.

PAO discussed the public involvement plan. The plan would be completed in the next few days and distributed for review before the next committee meeting.

A general discussion of possible legal actions and the impact of a "Super Range" occurred. EMD agreed to look at flight patterns and consider impact on the program.

Action: DEH.

The meeting was concluded by reviewing the goals and milestones. Activities are on course.

14 February 1984 - Subcommittee Briefing with the Lincoln Trail Area Development District in Elizabethtown.

2 March 1984 - ICUZ Committee met:

PAO discussed the public involvement, the meeting with LTADD and the news release. No comments were made concerning the plans.

DEH discussed the monitoring to be conducted by the US Army Hygiene Agency in April. The need for complete cooperation by DPT and units using the ranges was expressed. DPT, relayed that The Range Scheduling Officer, DPT, could assist in assuring adequate firing.

12 March 1984 - Subcommittee briefing with the Kentuckiana Regional Planning and Development Agency in Louisville.

12 March 1984 - Subcommittee briefing with HUD in Louisville.

10 May 1984 - Subcommittee briefing with Bullitt County Planning Division in Shepherdsville.

12 June 1984 - Subcommittee briefing with Hardin County Staff Planner in Elizabethtown.

22 August 1984 - Subcommittee briefing with City of Radcliff officials.

19 September 1984 - Subcommittee briefing with Bullitt County Planning  
Commission in DEH Office at Fort Knox.

2 October 1984 - Subcommittee briefing with members of Radcliff City Council  
and Hardin County Planning Commission in Radcliff City Hall.

11 October 1984 - Subcommittee briefing with Bullitt County Planning  
Commission at Bullitt County Courthouse in Shepherdsville.

15 April 1985 - Subcommittee briefing with Bullitt County Planning Commission.

## APPENDIX E

### AGENDAS ESTABLISHED BY ICUZ COMMITTEE

#### A. Milestones and Responsibilities Established at 3 February Meeting

MILESTONE	DUE DATE	DATE ACCOMPLISHED
Establish Goals	10 Jan 84	10 Jan 84
Establish Mission	10 Jan 84	10 Jan 84
Formalize Committee	13 Jan 84 - DEH	
Establish Plan of Action	24 Jan 84	
Identify Incompatible Areas (Step 2)	3 Feb 84 - DEH	
Brief Commanding General	3 Feb 84 - DEH/PAO	8 Feb 84
Develop Community Involvement Plan	13 Feb 84 - PAO	
Initial News Release	1 Mar 84 - PAO	
Initial Public Meeting		
Analyze New Contours	15 Mar 84 - DPT/DEH	
Revised Plan of Action (incl all incompatible areas)	15 Apr 84 - CMTE	
Follow Up News Release	1 May 84 - PAO	
Final Community Meeting	1 May 84	
Identify Alternatives	15 May 84 - CMTE	
Begin Negotiations (Step 5)	1 Jun 84 - PAO/DEH	

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(Identify mutually acceptable actions)

Evaluate Alternatives	15 June 81 - DPT/CMTE
Submit Draft Report (Step 6)	1 Sep 84 - DEH
Finalize Report	15 Sep 84 - DEH
Public Report	30 Sep 84 - DEH
(Step 7)	

#### B. ICUZ GOALS ESTABLISHED AT 3 FEBRUARY MEETING

DEH - Prepare Briefing for Commanding General

DEH/DPT - Sanitize list of Data for Noise Countour

Projection thru 2000

DEH - Get the Right People to Attend ICUZ meetings.

DEH - Get AEHA to Provide Ft. Knox Simulation Program

PAO/CMTE - Identify Community Involvement Thru Each ICUZ Step

CMTE - Identify People Responsible for Accomplishing Each Step

CMTE - Determine Milestones for each ICUZ Step

DEH - Have Regular Meetings and Keep People Informed (Committee Mgrs and Chain of Command)

At the 3 February meeting, the ICUZ committee reviewed goals and assigned each to a responsible party. These are the goals.

#### C. LIST, DEVELOPED AT 27 JANUARY MEETING, OF PEOPLE TO INVITE TO PUBLIC MEETINGS

Hardin County Planner

Hardin County Judge Exec.

Bullitt County Judge Exec.

Ky Regional Planning Agency

Lincoln Trail Planning

Meade County Judge Exec.

Jefferson County Judge Exec.

Radcliff Mayor

Shepherdsville Mayor

Muldraugh Mayor

Colesburg Mayor

West Point Mayor

Lebanon Junction Mayor

Sellersburg Mayor

Legislature State and/or Federal Chambers of Commerce

Realtors - President of County Board of Realtors

Elizabethtown Mayor



## APPENDIX F

### TEXT OF DRAFT GENERIC MOA

This agreement by and between the US Army Armor Center and Fort Knox and \_\_\_\_\_, is entered into in furtherance of the Fort Knox Installation Compatible Use Zone Program, hereinafter ICUZ Program.

PURPOSE: "The purposes of the ICUZ program are: (1) To analyze the noise generated by Army and community activities and the impact of this noise on the Army and civilian communities, and (2) to work with the surrounding community to ensure that future uses of land in noise impacted areas are compatible wit the generated noise levels.

Recognizing the need of both parties to cooperate to ensure that all factors are considered so development in noise impacted areas is with the least detrimental impact to both parties; the parties agree as follows:

1. Within the limitations of the assigned military mission and the availability of funds and manpower, Fort Knox agrees to:

a. Upon request of the \_\_\_\_\_, provide a technical advisor to fully explain the ICUZ Program.

b. Provide completed copies of the study, including noise contour maps which will depict the noise zones and areas of incompatible land uses.



c. Provide new information updating the study and maps as mission or data changes occur.

d. Participate in community planning for utilization of areas identified as incompatible use areas.

e. Institute and publicize a noise complaint procedure.

2. The \_\_\_\_\_, agrees, consistent with its primary objectives and responsibilities, to:

a. Utilize available ICUZ data in land-use planning.

b. Inform developers and real estate interests of the potential consequences of development in incompatible land use areas.

c. Coordinate with the installation on the identification of incompatible land use areas.

d. Inform the installation of the nature of any projected development of an incompatible use area.

**TERMS:**

1. Monitoring of Agreement. Representatives of the parties for this agreement agree to meet biannually to discuss the performance of the parties in complying with the actions agreed to under this MOA. This meeting shall be documented in a memorandum.

2. Update and Review of Agreement. This agreement shall be reviewed and updated every two years or at the request of either party upon giving written notice.

3. This agreement will become effective on the date this agreement is subscribed to by the last signatory. It shall continue in full force and effect for \_\_\_\_\_.

**TERMINATION:**

This agreement may be terminated by either party upon given written notice. Termination will be effective upon receipt of the notice.

The proper addressee for all correspondence is:

DIRECTORATE OF ENGINEERING AND HOUSING  
ATTN: Environmental Management Division  
Fort Knox, Kentucky 40121-5000